THE GENUS SCHISMATOGLOTTIS (SECTION PHILONOTION) IN AMERICA

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ABSTRACT

The genus *Philonotion* Schott is included in *Schismatoglottis*, forming the American section of an otherwise Asian group. Two species are recognized in this section: 1) *S. americana*, known only from Surinam, and 2) *S.* **spruceanum**, here transferred from the genus *Philonotion* and represented by two varieties: var. *spruceanum* of Amazonian Venezuela and adjacent Colombia, and var. **williamsii** of Amazonian Venezuela only. GEORGE S. BUNTING, Missouri Botanical Garden, 2315 Tower Grove Ave., St. Louis 10, Missouri.

The genus *Philonotion* was published by Schott (Gen. Aroid. 54. 1858.) to accommodate a single Spruce collection from Amazonian Brazil. For a century, this monotypic genus has been maintained and included in various works on the Araceae. Known from the type collection only, its alliance was variously interpreted. Schott (Prod. Syst. Aroid. 317. 1860.) judiciously placed *Philonotion* in the subtribe Adeloneminae immediately preceding subtribe Schismatoglottidinae. Engler (Pflanzenreich IV. 23(55):24. 1912.) included it in the subtribe Philodendrinae following *Philodendron*. This latter treatment is curious, since that author noted the parietal placentation, the distinctive stamens with apical pores, and the non-scandent habit of growth of *Philonotion*. In contrast, placentation in *Philodendron* is axile, the stamens are of an entirely different nature, and the species are predominantly scandent. The deciduous nature of the blade of the spathe and staminate portion of the inflorescence after anthesis in *Philonotion* further differentiate these two genera.

Philonotion falls clearly into the subtribe Schismatoglottidinae as defined by Engler (l.c. p. 24). Indeed it appears that *Philonotion* is the American section of the otherwise Malaysian genus *Schismatoglottis*.[1] The first and only American species to be described in the latter genus is *S. americana* Jonk. & Jonk. Following its description (Acta Bot. Neer. 2(3):362. 1953.), the authors commented upon the apparent relationship between *Philonotion* and *Schismatoglottis*. The current study has verified the close affinity of these two genera, and has demonstrated clearly that *S. americana* is congeneric with material referred by other workers to *Philonotion*.

Philonotion was initially characterized by a unilocular ovary bearing one parietal ovule. Recent collections that are undoubtedly conspecific with the type of this genus (*P. spruceanum* Schott) have either one or two parietal placentae each bearing one or two ovules, and the unilocular ovary may thus contain one to four ovules. The Malaysian *Schismatoglottii* commonly have ten or more ovules per ovary attached along three parietal placentae. With the exception of the fewer ovules, however, there is no constant floral character separating *Philonotion* from *Schismatoglottis*. Generally, an occasional staminode is found among the pistillate

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[1] Similar disjunction exists in other aroid genera. *Homalomena* is a predominantly Asian genus of about eighty species, six or seven of which occur only in America and have characters diverse enough to be considered as a separate section of the genus by Engler. A similar disjunction occurs in the genus *Arisaema*. One species of the otherwise American genus *Spathiphyllum* is native in Indonesia and the Philippines.

flowers in the latter genus, and some species have a sterile appendage of the spadix. The American species, previously referred to *Philonotion*, exhibit neither of these characteristics, but rather possess one outstanding vegetative feature apparently not found in any Asian species—the aristate or subcaudate apex of the leaf blade. Despite these differences, it seems prudent to reduce *Philonotion* to the rank of section under *Schismatoglottis*.[2]

Schismatoglottis section **Philonotion** (Schott) Bunt. stat. nov.

Philonotion Schott, Gen. Aroid. t. 54. 1858.

Key to the Species

A. Leaf blade 2–2.5 times longer than wide, 9 cm. or more wide, elliptic to oblanceolate.
.....1. S. americana

AA. Leaf blade narrower, 6 cm. or less wide, lanceolate to oblong.
B. Blade 3–5 times longer than wide, 2.5–6 cm. wide.....2a. S. spruceanum var. spruceanum
BB. Blade 7.5–9 times longer than wide, to 1.8 cm. wide.....2b. S. spruceanum var. williamsii

1. Schismatoglottis americana Jonk. & Jonk. Acta Bot. Neerl. 2(3):360, fig. 2. 1953.

holotype: *Maguire 24289*, Tafelberg, Surinam, Aug. 1944 (NY). Known only from the type collection.

2. Schismatoglottis **spruceanum** (Schott) Bunt. comb. nov.

Philonotion spruceanum Schott, Gen. Aroid. t. 54. 1858.

2a. Schismatoglottis spruceanum var. spruceanum.

Stenospermatium verecundum R. E. Schultes, Bot. Mus. Leafl. 18(4):121–122, pl. XXI, XXII. 1958.

lectotype: *Spruce 2948*, in ripis rivuli umbrosi, secus Panuré, Alto Amazonas, Brazil, Feb. 1853 (K). This is a duplicate of the holotype. The latter was deposited at Vienna and presumably destroyed when that herbarium burned following World War II. I have seen only a photograph of the Kew sheet; it appears to be nearly identical to the largest specimen on the New York sheet of *Maguire 36413*.

additional specimens: *B. Maguire, J. J. Wurdack, & G. S. Bunting 36311*, Yavita-Pimichín trail, Río Guainía, Terr. Amazonas, alt. 120–140 m., Nov. 21, 1953; *36413*, sabanita 1 km. east of Maroa, Río Guainía, Terr. Amazonas, Venezuela, alt. 120–140 m., Nov. 25, 1953; *36415A*, same data as *36413*.

The infrutescence of this variety has not been previously described. It is fusiform, about 3.5 cm. long and to 1.5 cm. in diameter (in the dried specimen), green, the apex more or less truncate (resulting from loss of blade of spathe), the

[2] To include this section, Engler's description of Schismatoglottis (Pflanzenreich IV. 23(55):82. 1912.) is emended as follows: " . . . placentis 1–4 parietalis e baseos adscendentibus; ovula 1–plura hemianatropa vel hemiamphitropa . . . ".

free upper margin revolute; fruits many, baccate, oblong, about 3 mm. long, 1 mm. broad, 1(–2)-seeded.

Schultes & Cabrera 17496 (GH), collected along Río Piraparaná, Comisarías del Amazonas & Vaupés, Colombia, appears to belong here. Unfortunately, that specimen could not be located at the time of this study. It is cited as type of *Stenospermatium verecundum*, but the photograph and plate accompanying the description of that species illustrates a plant clearly referable to *Schismatoglottis spruceanum*.

2b. SCHISMATOGLOTTIS SPRUCEANUM var. **williamsii** (Steyerm.) Bunt. comb. nov.

Philonotion williamsii Steyerm. Fieldiana Bot. 28(1):99, fig. 14. 1951.

HOLOTYPE: *L. Williams 13922*, Yavita, Terr. Amazonas, Venezuela, alt. 128 m., Jan. 23, 1942 (F).

ADDITIONAL SPECIMENS: *B. Maguire, J. J. Wurdack, & G. S. Bunting 36415B*, sabanita 1 km. east of Maroa, Río Guainía, Terr. Amazonas, Venezuela, alt. 120–140 m., Nov. 25, 1953. This is a mixed collection, *36415A* representing S. *spruceanum* var. *spruceanum*.

This variety appears to grow together with the variety *spruceanum*, but is distinctive in its much narrower leaf blades and slender petioles. Too few specimens have been collected to indicate to what degree these two forms intergrade.

S. *spruceanum* is a savannah species, occuring in partial sun on white sandy soil. It seems inappropriate to consider these conditions as "extreme xerophytism" as Schultes suggests (Bot. Mus. Leafl. 18(4):122. 1958.). Though the habitat may appear xeric, my field observations at Yavita and Maroa, Venezuela, were that abundant moisture was present about the roots of the plants.